



ExCiteS

Extreme
Citizen
Science

at University College London

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Participation in Citizen Science

Level 4 'Extreme'

- Collaborative science – problem definition, data collection and analysis

Level 3 'Participatory science'

- Participation in problem definition and data collection

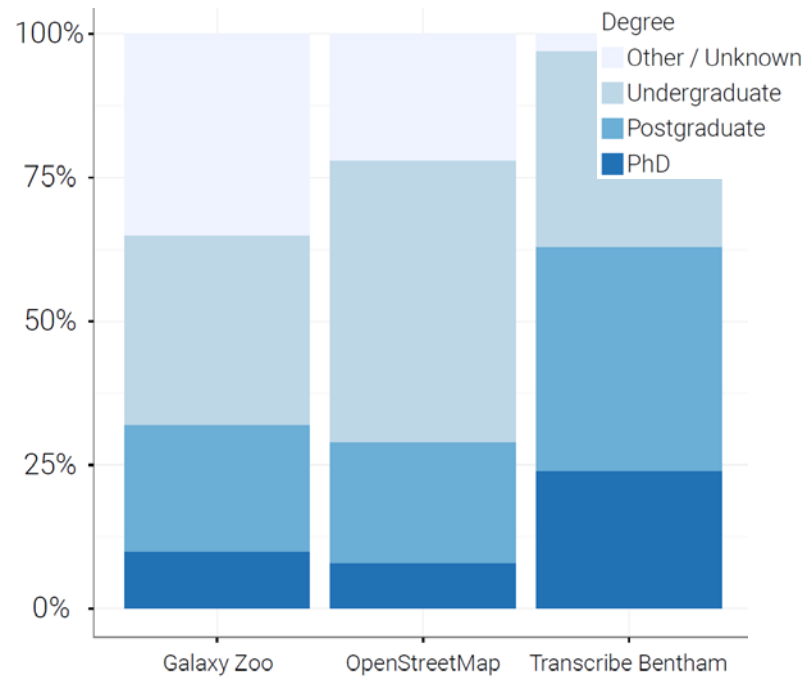
Level 2 'Distributed intelligence'

- Citizens as basic interpreters

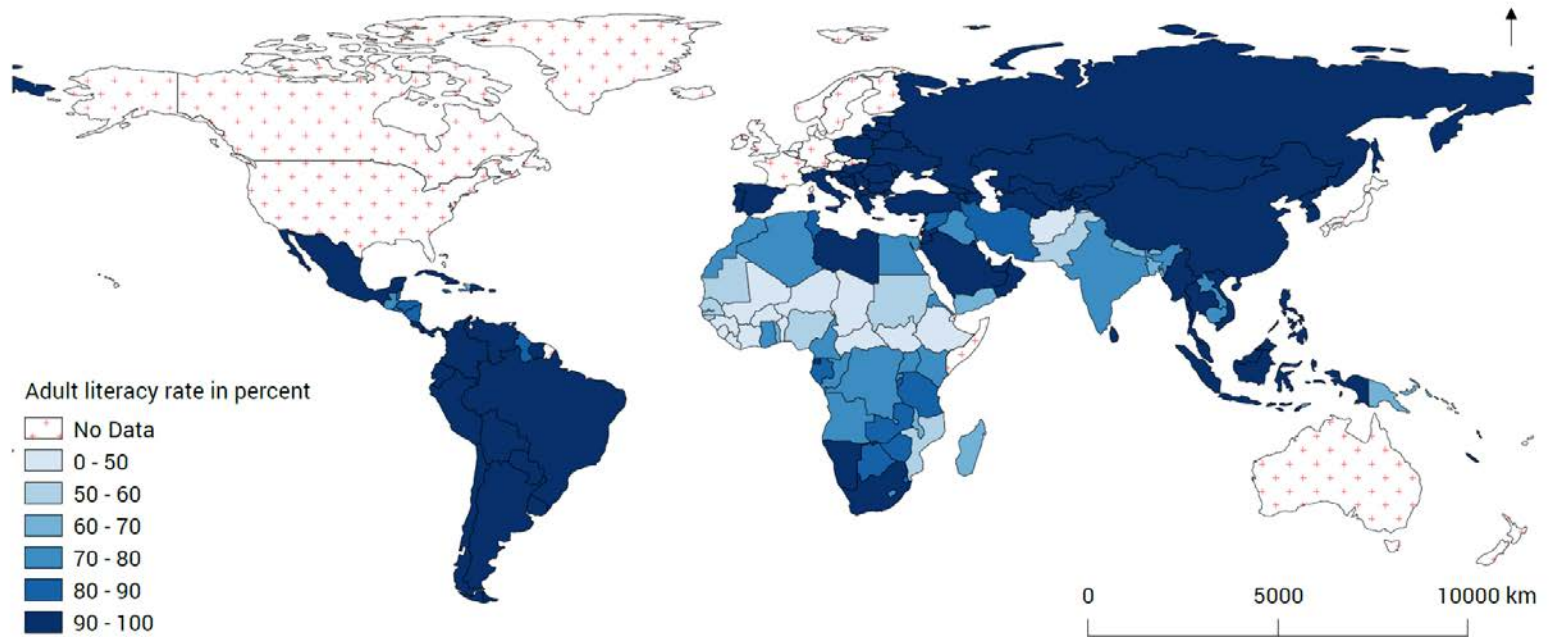
Level 1 'Crowdsourcing'

- Citizens as sensors

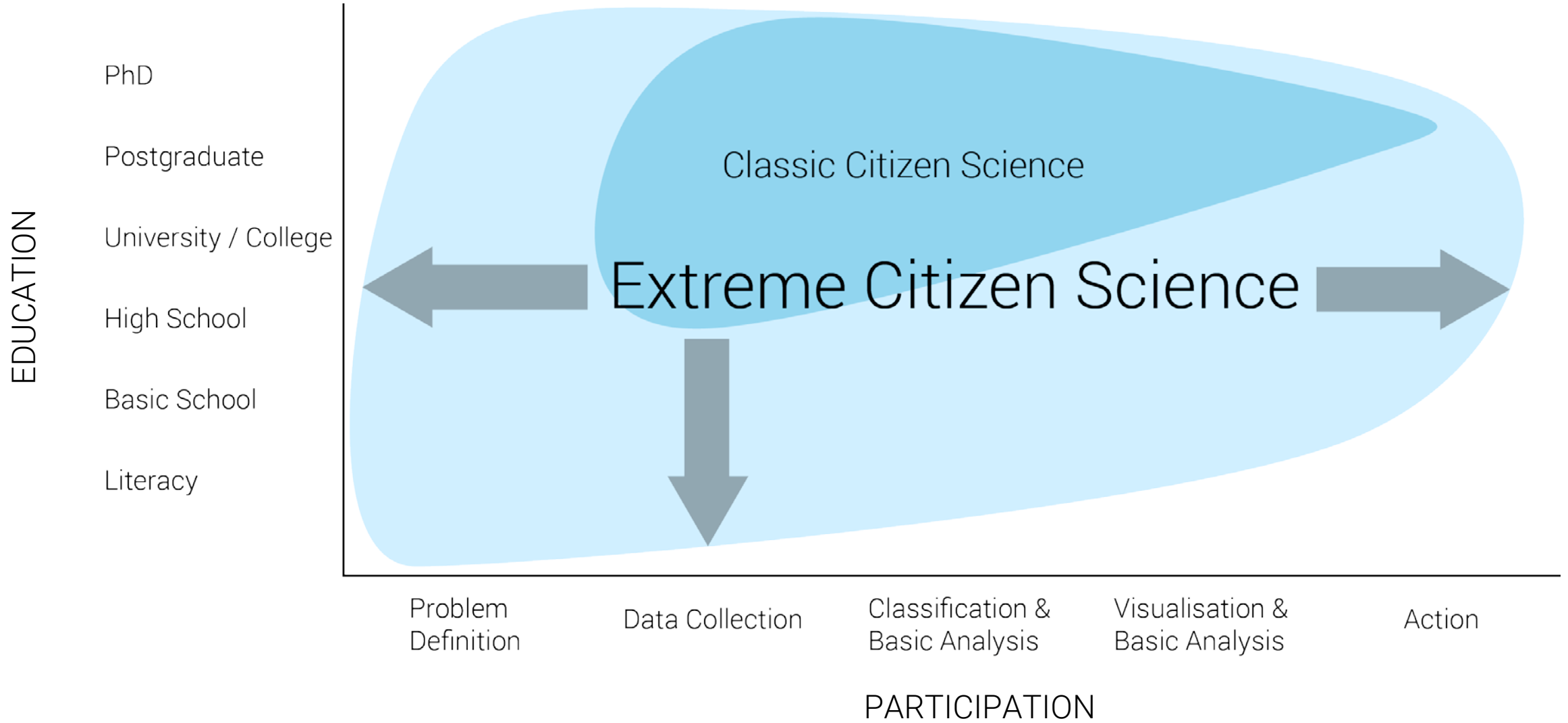
Level of Education in Citizen Science Projects



Global Literacy Rates



Data:
 Galaxy Zoo (Raddick et al., 2013),
 Open-StreetMap (Budhathoki and Haythornthwaite, 2012)
 Transcribe Bentham (Causer and Wallace, 2012).
 Literacy rate (15+ years) per country (UNESCO Institute of Statistics, 2015)





Community Driven Projects

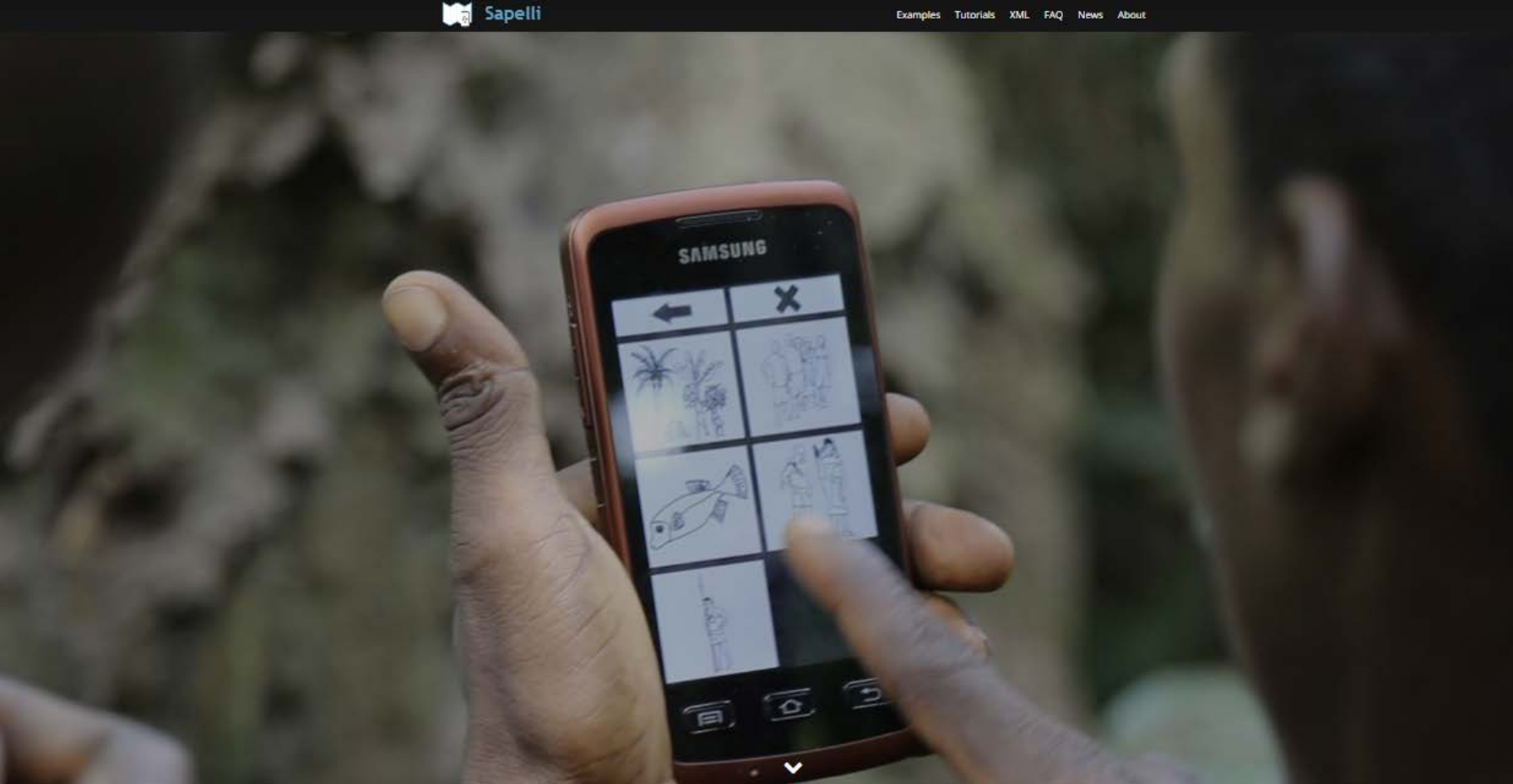


Citizen Science in the Congo Basin



Technical Infrastructure





<http://www.sapelli.org/>

Sapelli is an open-source project that facilitates data collection across language or literacy barriers through highly configurable icon-driven user interfaces. We encourage people to download the app from the [Google Play store](#), or from our [GitHub repository](#) and deploy it for their own purposes.

The sequence of interfaces that will be presented to the user in the project is described in the project's XML file. The transmission of complete records is handled autonomously by the Sapelli platform, which periodically checks for connectivity and determines the most appropriate means by which to transmit the compressed data to another phone or a [GeoKey](#) web server.

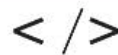
This website should help to get started with creating bespoke data collection apps that meet individual requirements.



EXAMPLES



TUTORIALS



XML
REFERENCE

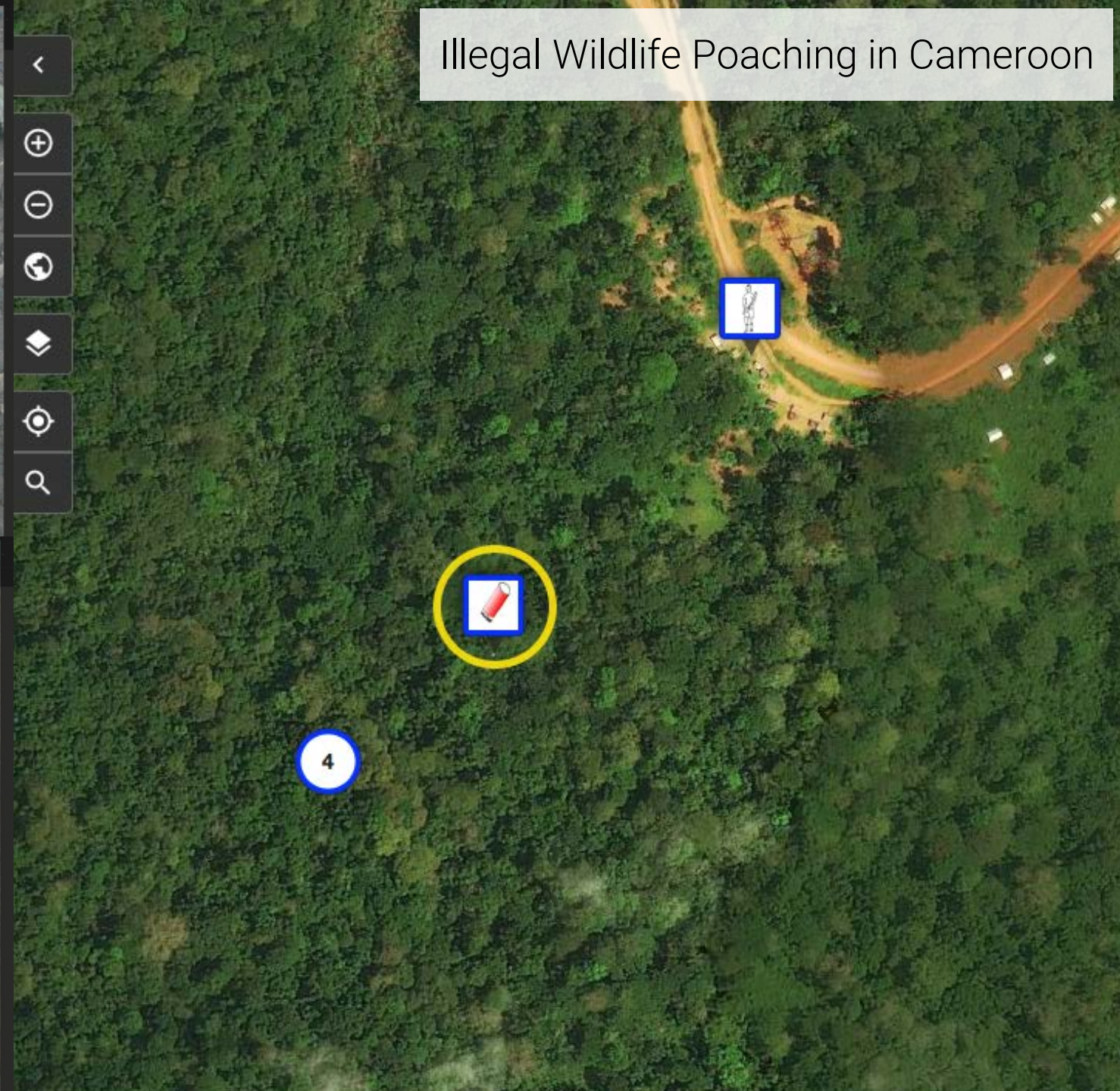
● Toggle file information



● Toggle file information



Illegal Wildlife Poaching in Cameroon



Social Enterprise



Community Air Quality Monitoring



<https://www.youtube.com/watch?v=7jTlyUIBVAg>

Citizen Science within Academia

- lack of funding to support citizen science within regular research
- lack of recognition in institutional promotion and recognition processes
- high rejection rate of proposals due to claims about data quality
- no funding for maintenance of technology
- what happens to volunteers after funded project has ended?

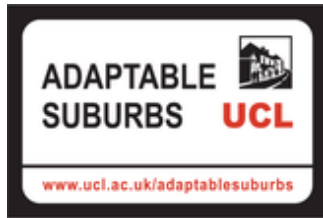
Citizen Science & Open Science

- Contributors should have right to read about their own research
- Open access publications necessary for motivation & feedback



Thank you...

... and the funders, project partners, and sponsors that we've worked with and will work with in the future



Advancing geography and geographical learning



References

Raddick, M. J., Bracey, G., Gay, P. L., Lintott, C. J., Cardamone, C., Murray, P., Schawinski, K., Szalay, A. S., and Vandenberg, J. (2013). Galaxy Zoo: Motivations of citizen scientists.

Budhathoki, N. R. and Haythornthwaite, C. (2012). Motivation for Open Collaboration: Crowd and Community Models and the Case of OpenStreetMap. *American Behavioral Scientist*, 57(5): 548–575.

Causer, T. and Wallace, V. (2012). Building a volunteer community: results and findings from Transcribe Bentham. *Digital Humanities Quarterly*, 6.

UNESCO Institute of Statistics (2015). Adult literacy rate, population 15+ years, both sexes (%). <http://data.uis.unesco.org/Index.aspx?queryid=166>.